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ABSTRACT

This report summarizes three years of evaluation research on the Army's Basic Skills Education Program. Two major sources were used to compile information about standard, pilot, revised, and developing basic skills programs: (1) data files from the Training and Doctrine Command, Enlisted Master File, and Defense Manpower Document Center; and (2) field visits to Army posts in the United States, Germany, and Panama. During these visits, program activities were observed and administrators, teachers, participants, graduates, noncommissioned officers, and commanders were administered questionnaires and interviewed. The studies found that all programs improve soldiers' basic skills; however, many soldiers graduate from basic skills programs without achieving criterion scores on standard tests. Soldiers show greater enthusiasm for job-related curricula than for materials lacking military content and express positive opinions about teachers. Factors common to all programs that may influence their effectiveness are teachers' lack of specialized training and experience, the wide range of skill levels within classes, and reduced resources and personnel turbulence resulting from the low-bid system. The Department of the Army can use the findings of this evaluation to guide future decisions concerning the Basic Skills Education Program. (KC)

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Research Report 1380

Three Years of Evaluation of the Army's Basic Skills Education Program

Joan Harman

Instructional Technology Systems Technical Area
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This report summarizes 3 years of evaluation research on the Army's Basic Skills Education Program. It describes analyses of standard, pilot, and revised programs as well as programs under development. Overall findings reveal that all programs tend to move participants in the direction of Army goals, although a substantial number of soldiers fail to meet program criteria. Army decision makers can be guided by these findings in planning the future of the Basic Skills Education Program.

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Research Report 1380

Three Years of Evaluation of the Army's Basic Skills Education Program

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FOREWORD

The Curriculum and Evaluation Team of the Instructional Technology Systems Technical Area of the U.S. Army Research Institute for the Behavioral and Social Sciences performs evaluation and curriculum development applicable to military education and training. A major focus of this research is the development of information on which the Department of the Army can base decisions about its Basic Skills Education Program.

This report summarizes three years of evaluation research on the Army's Basic Skills Education Program. General findings are that the program improves the skills in which eligible soldiers are deficient. However, many soldiers graduate from the program without achieving criterion scores on standard tests. Common factors that may dilute program effectiveness include teachers' lack of specialized training and experience, the wide range of skill levels within classes, and ongoing personnel turbulence.

This research effort was supported by the Office of the Adjutant General of the Army and the Training and Doctrine Command.

Edgar M. Johnson

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THREE YEARS OF EVALUATION OF THE ARMY'S BASIC SKILLS EDUCATION PROGRAM

EXECUTIVE SUMMARY

Requirement:

The Department of the Army has a need for information on which to base decisions about the future of its Basic Skills Education Program.

Procedures:

Two major sources were used to compile information about standard, pilot, revised, and developing basic skills programs:

1. Data files from the Training and Doctrine Command, Enlisted Master File, and Defense Manpower Document Center, and

2. Field visits to Army posts in the continental United States, Germany, and Panama. During these visits, program activities were observed and administrators, teachers, participants, graduates, noncommissioned officers, and Commanders were given questionnaires and were interviewed.

Findings:

All programs improve soldiers' basic skills. However, many soldiers graduate from basic skills programs without achieving criterion scores on standard tests. Soldiers show greater enthusiasm for job-related curricula than for materials lacking military content, and express positive opinions about teachers. Factors common to all programs that may influence their effectiveness are teachers' lack of specialized training and experience, the wide range of skill levels within classes, and reduced resources and personnel turbulence resulting from the low-bid system.

Utilization of Findings:

The Department of the Army can use these findings to guide future decisions concerning the Basic Skills Education Program.

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THREE YEARS OF EVALUATION OF THE ARMY'S BASIC SKILLS EDUCATION PROGRAM

In 1980, the Army Research Institute was tasked by the Office of the Adjutant General of the Army to carry out an evaluation of the Army's Basic Skills Education Program. Under contract with the Army Institutes for Research, this effort has been ongoing since February 1981. During this period, a great number of reports and memorandums documenting evaluation activities and findings have been produced. The following report has been prepared to consolidate and summarize this information. Detailed discussions of evaluation results and data displays can be found in the reports cited in the text.

GENERAL

The Basic Skills Education Program (BSEP) is a part of the Army Continuing Education System--the primary delivery system for training and educational opportunities designed to help soldiers succeed in their careers. The programs grouped under the BSEP rubric provide enabling skills in language, literacy, arithmetic, computation, and speaking. The underlying rationale for BSEP is that some enlistees lack sufficient literacy and/or English-language skills to perform their jobs effectively, and that these deficiencies can be remedied by BSEP programs.

BSEP I designates programs in literacy and English as a second language (ESL) offered at the training base prior to or concurrent with Initial Entry Training (IET). BSEP II programs involve soldiers assigned to permanent duty stations after completing IET. All of the programs are monitored by Education Services Officers (ESO) and instruction is delivered by contract teachers. During the period covered by this report, teachers had either individual contracts or were employed by institutions contracted to provide instructional services. Each contract institution supplied its own syllabus, curriculum materials, lesson plans, and instructional approach to literacy training. In the case of ESL programs in both BSEP I and BSEP II, most contractors used the American Language Course developed by the Defense Language Institute (DLI). However, adaptations of the course materials to the needs of differing groups of soldiers, and the manner in which teachers tended to enhance classroom instruction by introducing materials such as military charts and models, resulted in substantial instructional differences from class to class. It is important to note, however, that, although BSEP delivery methods varied, program goals remained constant; "...to satisfy the skill development and occupational needs of the Army in defense of the nation; and increase soldiers' career potential, job satisfaction, and educational growth" (Army Regulation 621-5, 1981).

Potential candidates for BSEP training are soldiers who fail to meet the criterion score on the General Technical (GT) subtest of the Armed Services Vocational Aptitude Battery (ASVAB) or who speak English as a second language. These soldiers are screened for enrollment eligibility on the basis of scores on the Test of Adult Basic Education (TABE) for general literacy training and the English Comprehension Level Test (ECLT) for language training. Those who fail to meet test criteria are, at the discretion of their Commanders, permitted to enroll in the program.

Another way to participate in BSEP is by means of command referral. That means that soldiers' supervisors judge that they need literacy or English-language training in order to succeed in IET or in their duty assignments. A third way to enroll in BSEP is by means of individual requests made by soldiers and approved by their commanders.

Not all eligible soldiers enroll for BSEP training. In particular, Enlisted Reserve and National Guard eligibles commonly find it difficult to extend their annual training requirements to accommodate BSEP. Even in the case of Active Army eligibles, participation is disapproved when soldiers cannot be spared from their jobs. As a result, it is possible to compare, on a variety of indices, performance of BSEP graduates with that of soldiers eligible for BSEP who did not enroll.

In addition to evaluating established literacy and ESL programs, our task encompassed pilot and revised programs, as well as programs under development. We also carried out a Needs Assessment for a program currently being developed, and evaluated materials developed to identify prerequisite competencies needed by soldiers for satisfactory performance of job tasks. All of these activities are described below.

The first group of programs to be discussed, BSEP I programs, include the BSEP I literacy programs, two special programs developed for specific Military Occupational Specialties (MOS) and materials developed to provide a basis for production of job-relevant BSEP curricula covering 94 of the Army's highest density MOS.

BSEP I PROGRAMS

Basic Literacy Programs

These programs, offered at training bases, provide soldiers whose screening tests result in reading levels below fifth grade with training in remedial reading, writing, and computing skills. The training usually lasts from 3 to 6 weeks, and each Army post selects a competitive contractor who provides instructional materials and teachers (Krug, Hahn, & Wise, 1983).

Our method for evaluating these programs was to analyze data files from the Training and Doctrine Command (TRADOC), Enlisted Master File, and the Defense Manpower Document Center. These files covered records of both program participants and eligible nonparticipants for the years 1979, 1980, and 1981. Variables analyzed included test scores (Adult Basic Learning Examination, TABE, and ASVAB), rates of attrition, pay grades, Enlisted Efficiency Report (EER) scores, and Skill Qualification Test (SQT) scores (Krug & Wise, 1982a).

When participants and eligible nonparticipants were matched for ability level (screening test scores) and length of service, the average pay grade of participants was higher than that of eligible nonparticipants. In addition, attrition rates were slightly lower for participants than for nonparticipants. No significant differences were found between these groups for EER or SQT scores. In terms of scores resulting from testing prior to and following

training, BSEP was found to result in modest gains in grade-level scores in reading, vocabulary, spelling, arithmetic computation, and problem solving.

Although overall attrition was lower for BSEP graduates, this advantage was demonstrated by soldiers in units. No attrition advantage showed up in IET either in Basic Combat Training (BCT) or in Advanced Individual Training (AIT). This may indicate that BSEP has a greater impact on unit demands than on those of IET. The data showed, however, that BSEP exit test scores positively correlated with success in AIT, i.e., twice as many low-scoring soldiers attrited as did high-scoring soldiers (Krug, Hahn & Wise, 1983).

MOS Baseline Skills Programs

One of the two projects entitled MOS Baseline Skills called for production of materials that would permit the development of curricula to teach soldiers competencies needed to perform 94 of the Army's highest density MOS, as well as common soldier tasks (CST). This required TRADOC's contractor to analyze MOS and CST, identify relevant prerequisite competencies, cluster the competencies common to two or more MOS to reduce redundancy, develop curriculum models based on the clusters, and then design specifications for the curriculum models. Finally, the contractor was required to provide two tests for each MOS and for the CST (Hahn & Edwards, 1983).

The second MOS Baseline Skills project called for development of functionally oriented (job-related) curriculums for two Signal School MOS; 05C, radio teletype operator, and 31M, multichannel communications equipment operator. We were requested to evaluate these projects while development was in process so as to provide guidelines and recommend changes prior to production of final materials.

The following two sections describe the procedures used and the findings that resulted from evaluating these efforts.

Baseline Skills for 94 High-Density MOS and CST. TRADOC's contractor produced a taxonomy of prerequisite competencies needed to perform job tasks for 94 MOS and CST. Then TRADOC provided us with a sample of job tasks and associated competencies for 30 of the 94 MOS so that we could evaluate the taxonomic structure. The sample included combat arms, combat support, and combat service support jobs. Selected staff members were provided with major and minor category titles and taxonomic terms and were requested to develop their own taxonomies by sorting prerequisite competencies into categories judged to be appropriate. These results were then compared to the taxonomy constructed by TRADOC's contractor to determine the extent to which both groups of analysts agreed about the structure.

Results showed complete agreement between the two groups of analysts on 22% of the competencies sorted into categories and complete disagreement on 11% of the competencies. The taxonomic categories were not found to be mutually exclusive and they did not all reflect the same level of organization (i.e., there were generic categories and mixed categories, content categories and process categories). There was substantial variability in the levels of specificity of categories and subcategories. We found redundant major categories and misplaced subcategories. The correlation

coefficient between the two groups of analysts was .68. The contractor provided TRADOC with a detailed analysis to guide ongoing development (Hahn & Edwards, 1983).

We were also requested to evaluate a sample of the design specifications produced by TRADOC's contractor to provide a basis for curriculum development based on the taxonomy of prerequisite competencies. Our recommendations included the integration of military language and materials into the lessons to be developed (including indicators where mastery of lower level skills was essential to performance of higher level skills), the need for specific and clearly written learning guidelines, and the need to correct confusing technical language, inconsistent terminology, and writing errors (Stoddart & Hahn, 1983a). Guidelines were provided to TRADOC to assist in the development of the MOS Baseline Skills design specifications.

The final step in this effort will be to evaluate the validation of the locator and diagnostic tests produced for each MOS and CST.

The next section describes evaluation of BSEP II programs and includes a Needs Assessment for a program under development, the Job Skills Education Program (JSEP), and evaluation of a pilot program to teach learning strategies.

BSEP II PROGRAMS

Basic Literacy Programs

These programs, offered at unit sites, provide soldiers whose screening tests result in reading levels below grade nine with remedial literacy training. In addition to the methods already mentioned by which soldiers enroll in BSEP--command referral, voluntary requests, and GT scores below criterion--BSEP II also enrolls soldiers who fail to meet criterion SQT scores.

The same data files analyzed for BSEP I were analyzed for BSEP II with the same overall results: higher average pay grades, lower attrition rates, gains in grade levels, and no significant effects on EER or SQT scores when participants were compared to eligible nonparticipants. A notable difference between BSEP I and II graduates was found in grade-level gains. The average grade-level gains for BSEP II graduates were about twice the magnitude of gains achieved by BSEP I graduates. In addition, BSEP II graduates showed an average gain in GT scores of 17 points.

We traveled to Germany and Panama to carry out a number of program evaluation tasks, among which was asking Commanders and noncommissioned officers (NCOs) about their experiences with and opinions of BSEP II and its graduates (Stoddart & Hahn, 1983).

Interviews with Commanders and Noncommissioned Officers

The general tendency was that Commanders permitted soldiers to enroll in BSEP II as a reward for good performance. Most soldiers enrolled to improve their GT scores. Their supervisors reported that the greatest need was for BSEP to train soldiers in reading, then in writing, and listening

skills. However, supervisors felt that the greatest benefits resulting in BSEP training were in improved self-esteem, attitudes, and motivation. Although job performance benefits were, in supervisors' opinions, secondary, these supervisors admitted that their soldiers improved in terms of motivation to perform their jobs, that they required less supervision, and that more program graduates performed in the top third of all unit soldiers than they did before attending BSEP classes.

Supervisors had mixed opinions about the way that unit activities are disrupted when soldiers attend classes. Although they found these disruptions inconvenient, they still thought soldiers gained enough from BSEP to make it worthwhile. Overall, the Commanders and NCOs were of the opinion that BSEP II training had positive effects on soldiers' performance (Stoddart & Hahn, 1983).

Job Skills Education Program

A standardized, functionalized, computer-based BSEP II program is under development and is expected to be fielded in 1986. In order for sponsors and developers to be guided by concerns and requirements of field personnel, we conducted a JSEP Needs Assessment. The Needs Assessment not only revealed field personnel's feelings about the forthcoming program, but also resulted in a substantial body of information about existing literacy programs. Although these results are summarized also, they are provided in somewhat greater length in order to give a more comprehensive picture of the way BSEP II functions in the field. Those questioned and interviewed included soldiers participating in BSEP II, teachers, first-line supervisors and Commanders in the Development and Readiness Command, Forces Command, Health Sciences Command, Training and Doctrine Command, Western Command, Germany, and Korea (Stoddart & Hahn, 1985).

Participating Soldiers. Most soldiers enrolled in the BSEP II programs that we covered had high school diplomas or equivalent certificates. The programs in which they enrolled usually used self-paced, modular curricula on which soldiers worked independently. The soldiers expressed willingness to have course materials presented by computer (JSEP presentation also is expected to be self-paced, modular, and worked on independently). Participants expressed favorable opinions of teachers, satisfaction with existing course content, and comfort with the difficulty level of the course materials. Generally, soldiers claimed that BSEP II was worth their time and effort and also reported a preference for morning, on-duty classes that start at the beginning of their duty assignments (in contract to Commanders and NCOs who would prefer that classes be scheduled prior to duty assignments). Most soldiers reported having enough out-of-class time to study and some felt that the programs should be of longer duration.

Some differences were found between basic skills needs perceived by Commanders and NCOs and those of soldiers enrolled in BSEP II. Soldiers had somewhat more confidence in their reading, writing, and listening skills than did their supervisors. In reading, soldiers reported that they mainly needed to learn rules about how things work and how to order job steps. Writing and listening are skills important to job performance, soldiers acknowledged, but they felt confident that they could handle job demands in

these areas. Soldiers also reported that the most useful skill they could learn to enhance job performance involved memorizing materials. In contrast, Commanders and NCOs pointed to soldiers' needs in basic reading, writing, and listening, and emphasized that soldiers need to learn to pay attention to details and to complete jobs they have started. The point here is that some soldiers may be overconfident of their abilities and harbor inaccurate perceptions of their basic skills needs.

Another finding concerns soldiers' use of military manuals. Soldiers reported infrequent use of manuals, although the one they were most likely to use was the Soldier's Manual. Their greatest problems with this manual were matching pictures, diagrams, and schematics to equipment or terrain, and extracting information from charts and graphs.

Commanders and NCOs. Supervisors of BSEP II soldiers expressed willingness to support the programs and release soldiers to attend classes in spite of disruptive effects on training schedules. Supervisors felt that the programs were worthwhile because they improved soldiers' job performance, but reacted positively to the alternative of scheduling BSEP training prior to duty assignments in order to reduce interference with work schedules. These supervisors reported that the durations of the programs are appropriate and that classes entailing 4 to 6 hours a day seem reasonable.

Teachers. Most teachers we contacted had received some specialized training to teach BSEP II. Most had held their teaching jobs for only 1 year or less, indicating a high turnover. Their jobs included making classroom presentations, tutoring individual soldiers, administering and scoring tests, keeping records, and developing classroom materials. Some of the teachers had incorporated Army-relevant materials into their classes. Many teachers also acknowledged their lack of detailed knowledge of military subjects. When asked about the test used to screen soldiers for eligibility (TABE), teachers reported it to be generally satisfactory but lacking finer diagnostic characteristics at reading grade levels below five.

Teachers tended to disagree with Commanders and NCOs about command support for BSEP II, and pointed to repeated instances when soldiers were withdrawn from classes for work assignments. In terms of the proposed JSEP program, teachers expressed concern that they would be usurped by computers and that soldiers would be deprived of the personal attention and encouragement they need. Teachers also expressed some reservations about soldiers' ability to operate computer equipment.

Perceived Advantages and Disadvantages of JSEP. A summary of our assessment reveals that JSEP has a number of potential advantages over the basic literacy courses currently provided in BSEP II. Since it is to provide job-related curricula, JSEP is expected to improve job skills and unit morale. JSEP curriculum will be common across BSEP II sites, its teacher training will be uniform, and because it will be computer based, it could reduce the impact of high teacher turnover, reduce the need for teachers to plan instruction, and provide ease of record keeping, curriculum updating, test scoring, and instruction at remote sites.

Some reservations about the new program include possibilities of equipment breakdowns, delayed repairs, power failures, fatigue or boredom as a

result of long periods of work at computer consoles, reduction in interpersonal exchanges between teachers and students, teachers' resistance to being replaced by computers, and a need for teachers to become familiar with a broad variety of MOS tasks (Stoddart & Hahn, 1985).

JSEP Lesson Specifications. We were provided with approximately 10% of the estimated total number of lesson specifications to be prepared for JSEP. Our purpose in evaluating them during the process of development was to provide guidelines to developers early so that any needed redirection of effort could be made prior to project completion. We distributed the specifications to two staff members with expertise in curriculum development and requested that they evaluate them in terms of their suitability for production of curricula for the JSEP program. Then we consolidated their comments and recommendations.

In general terms, the specifications were of a sufficiently high quality to provide curriculum designers with ample guidance for producing an organized curriculum that would meet learning objectives. However, there were a few points that merited consideration.

First, developers should keep in mind that a totally computer-based program is a radical departure from existing presentation modes and could require extensive orientation and adaptation on the part of the users. In this same context, the specifications made no provision for teacher-student interaction.

Second, the specifications would be more helpful to curriculum developers if they included more detailed guidance about the intended complexity of instruction to be given to each of the prerequisite competencies that will be taught. (These prerequisite competencies are those developed for 94 high-density MOS and CST discussed above under MOS Baseline Skills.) In addition, it is important to be aware that some of the competencies were originally assigned to the wrong job tasks. These assignments need to be reviewed, and it was also recommended that relationships among competency categories and job tasks, test items, and learning objectives be defined more explicitly. In some cases, prerequisite competencies could be combined (e.g., four competencies associated with outlining) so that a single lesson could be designed that incorporated all of them.

Finally, we recommended that some presentation features be reconsidered on the basis of their suitability for an adult population (e.g., interjected cartoon figures). Some of the rewards and incentives included in the specifications also seemed somewhat juvenile and needed to be reevaluated (C. P. Hahn, personal communication, October 1983).

Learning Strategies

In 1981 a pilot program intended to embed learning strategies in BSEP II curriculum content was conducted at Fort Knox. The objective of the pilot was to determine if training soldiers in cognitive skills (i.e., strategies that they could use to organize, interpret, and remember material to be learned) would enhance their acquisition of basic skills. The particular

program selected for tryout was an adaptation of Feuerstein's Instrumental Enrichment Program (IE) (Russ-Eft & McLaughlin, 1983).

The IE program consists of 14 instruments (exercise booklets) that can be used to teach basic cognitive skills such as problem definition, analytical thinking, systematic searching, perceptual precision, and learning processes. The instruments were designed to be used with culturally deprived adolescents and led to increased scores on standard tests. The objective of the program is to change passive, dependent cognitive responses to autonomous, independent responses.

The Army tryout did not accomplish the desired goals. That is, soldiers did not demonstrate significantly improved levels of either cognitive skills or posttest scores on basic literacy tests. The tryout pinpointed areas of possible difficulties in administering the IE program so that future adaptations could avoid such pitfalls. Our evaluation provided this information.

The adapted version of the IE program reduced 2 years of instruction to 6 weeks (soldiers with higher GT scores) and 12 weeks (soldiers with lower GT scores), and included only a sample of the instruments used in the full-scale IE program. Also, the full-scale program was developed for culturally deprived adolescents, not adult military personnel. Because the 2-year program administered to adolescents was successful, attenuating the program and using it with adults may have diluted its effectiveness. Another possible important difference is that Feuerstein's posttest data were gathered 5 years after the instruction was given. The soldiers at Fort Knox were tested for program effects immediately after the coursework was completed.

Another factor that may have contributed to the lack of substantive effects was inadequate teacher training. Teachers never fully appreciated the importance of integrating IE materials into coursework and spending the full amount of time called for on each instrument. The teachers expressed ongoing concern that they were neglecting basic literacy subjects which soldiers needed badly. Furthermore, instructors never really mastered the necessary skills for relating individual learning strategies to real world situations. All of this implies the teachers' incomplete understanding of the nature of these learning strategies.

An additional circumstance that affected the tryout was termination of the teachers' contracts part way through implementation of IE. This event constituted a clear morale problem so that, by the end of the cycle, some teachers were not using any IE materials at all in their classes.

It is important to note that the soldiers who were provided with IE instruction demonstrated gains in test scores just as great as those of soldiers in classes in which IE was not included. Furthermore, it has not been determined whether strategies taught during the Fort Knox tryout will have long-term effects on these soldiers' learning abilities. Given all of the above circumstances, it seems reasonable to conclude that the IE did not receive an adequate tryout.

The final section summarizing our evaluation activities covers ESL programs and includes a discussion of the ECLT, 11B Language Skills, baseline programs, pilot programs, and the new functionalized program.

ENGLISH-AS-A-SECOND-LANGUAGE PROGRAMS

The Army provides ESL training both at training bases as part of BSEP I and at unit sites as part of BSEP II. Soldiers are screened for eligibility by means of the English Comprehension Level Test and those with scores lower than 70 (range 0 to 100) are considered in need of English-language instruction. Most enrolled soldiers are members of the Active Army. Enlisted Reserve and National Guard members tend to reject the offer of ESL training.

Although soldiers needing English-language training constitute only a small part of the enlisted force (approximately 5%), they receive much attention. One reason for this special focus is that limited-English-speaking (LES) soldiers, most of whom are insular Puerto Rican, tend to be a well-educated and highly motivated group who, equipped with adequate English-language skills, become an asset to the military. An additional reason is that the Army is confronting a shrinking recruitment pool during the 1980s and anticipates admitting a growing proportion of Hispanic recruits. As a result, the Army has supported pilot ESL programs as well as development of a functionalized curriculum to enable LES soldiers to succeed in training and job performance.

English Comprehension Level Test

The ECLT has been used as the index of English-language proficiency at DLI for more than 20 years. However, since the test requires only reading and listening, some questions arose about its value when used to test soldiers with marked deficiencies in spoken English. As a result, we developed an individually administered test called the Oral Proficiency Test that was based on a test provided by DLI and that required both speaking (production including vocabulary, grammar, fluency, and pronunciation) and understanding spoken English (comprehension). We used this test with 86 participants in a 3-month pilot ESL program provided by DLI and in 6-week BSEP I programs.

Correlations between Oral Proficiency scores and ECLT scores were high (.70 to .89) with the exception of one subtest--pronunciation. Soldiers who had received only 6 weeks of ESL training showed no gains in scores on this subtest. A high correlation was also found between ECLT scores and ratings by BCT and AIT instructors of soldiers' English-language proficiency as well as with attrition in the training base (Harman, Oxford-Carpenter, & Redish, 1983).

MOS 11B Language Skills

During the initial stage of our evaluation activities, we conducted a needs assessment involving limited English-speaking and native English-speaking soldiers who were participating in AIT for MOS 11B at Fort Benning. We developed a test using Job Language Performance Requirements for MOS 11B from an analysis produced by DLI. The outcome was that, on the average, LES soldiers missed more than 25% of the test items and those who had ECLT scores below 70 missed approximately 50%. These results contrast with those of native English-speaking soldiers who missed about 5% of the test items. A small number of soldiers participated in this assessment so that the findings must be considered indicative rather than definitive (Holland, 1982).

Six-Week English-as-a-Second-Language Programs

Six-week programs using the American Language Course developed and used by DLI were part of BSEP at the beginning of our evaluation efforts. We gathered data on these programs not only to assess program effectiveness, but also to serve as baseline information for comparing pilot (3-month and 6-month) and revised (functionalized) programs. We visited seven TRADOC (BSEP I) sites during 1981 and 1982 to administer questionnaires and interview Education Services Offices' staff members, teachers, and participants and their supervisors.

Most programs used the American Language Course as the curriculum and supplemented it with military information (e.g., Training Extension Course tapes, BCT charts, Soldier's and Field Manuals, etc.). Classes tended to include soldiers with wide-ranging language deficiencies. This was a result of the open-entry system that permitted soldiers to join classes in progress as they reported to the post and were screened for eligibility. In addition, enrollments fluctuated and, when enrollments were low, it was not cost effective to separate soldiers on the basis of language-deficiency levels.

Instruction for most programs was provided by contractors. In some instances, ESOs hired teachers by means of nonpersonal services contracts. In both cases, lowest bidding contractors or lowest bidding teachers had to be selected. This turbulence could occur on a yearly basis. The result was high teacher turnover and low morale as salaries declined from year to year. It also required repeated warmup periods and reduced services as new contractors took over direction of the programs from year to year.

Soldiers enrolled in the programs had widely distributed ECLT scores, although more scores were distributed in the low (0-29) and middle (30-49) ranges than in the high range (50-69). Eligible soldiers who did not enroll in BSEP for English-language training tended to have ECLT scores at the high end of the distribution. This was, in part, because those who did not enroll when the initial opportunity was available and who had pronounced deficiencies tended to enroll after they demonstrated communications problems. All of the soldiers interviewed indicated prior knowledge of English--most frequently in school settings in which they were taught to read and write English but had little experience with English conversation (Holland, Rosenbaum, Stoddart, Redish, Harman, & Oxford-Carpenter, 1984).

Soldiers tended to feel positively about the ESL programs and their teachers. At posts where participants were billeted with English-speaking soldiers, they had opportunities to practice what they learned in classes. However, many participants were assigned to ESL companies, and most ESL soldiers we interviewed said that the classroom instruction included too little English conversation. Many also pointed to a need for more time to study outside of classes. About half of the participants felt that the 6-week program was too brief.

Soldiers who graduated from the program improved on ECLT scores by an average of two points per week. Clearly, those who entered the program with scores at the lower end of the distribution failed to meet the criterion score of 70 during the 6-week period. We found positive correlations between ECLT exit scores and AIT success, attrition, and recycling, and these effects were more pronounced for soldiers whose exit scores were above 50.

Pilot English-as-a-Second-Language Programs

A 6-month ESL program was conducted at DLI during the fall of 1980 and the winter of 1981. The program was ending at the time that our evaluation activities began. However, we visited DLI to obtain data gathered during the 6-month period and to interview teachers and program administrators. Of particular interest was a group of 200 soldiers selected as eligible for ESL participation but who were not enrolled in the program. These soldiers served as a control group for measuring program effects. Both the enrolled and eligible nonenrolled soldiers volunteered either to participate in the 6-month program or to go directly to BCT.

During the sumnmer and fall of 1981, a 3-month ESL program was provided at DLI. We gathered interview, questionnaire, and testing data on this pilot program also.

Language acquisition in both pilot programs tended to be the same orderly predictable phenomenon that was demonstrated in 6-week ESL programs. Participants tended to gain two ECLT points per week. In contrast, the group of soldiers who were screened as eligible but who went directly to basic training sites showed average gains of only one-half ECLT point per week. These soldiers were retested between 6 and 9 months following initial screening and some of them had been enrolled in 6-week ESL programs at training bases. In addition, attrition was significantly greater for control group soldiers than for pilot program graduates. Another finding common to the pilot programs and standard 6-week programs was that soldiers felt that instruction should include more English conversation and less reading.

We followed as many program graduates as we could into BCT and AIT. We are still analyzing data on long-range effects and will report our results later this year. Early indications are that there is a high correspondence between soldiers' final ECLT scores and ratings of their English proficiency by drill sergeants and AIT instructors. There was a distinction between soldiers who scored below ECLT 50 and those who had exit scores of 50 or more in terms of their supervisors' ratings. Program graduates reported that their greatest language deficiency continued to be speaking skills. However, most said that the programs at DLI had equipped them with sufficient English-language skills to complete BCT and AIT (Stoddart, 1982).

Functionalized English-as-a-Second-Language Program

In July 1982 TRADOC implemented a job-related ESL curriculum at eight sites. DLI personnel developed the curriculum which was designed to provide soldiers with 6 weeks of training in English-language skills as well as with a vocabulary that would facilitate their progress through basic training. The curriculum was developed for soldiers with entry ECLT scores from 50 to 69. Our evaluation of this program started in August 1983 and is continuing at this writing. The findings detailed below represent information gathered to date. Whether any changes in present trends will be documented by the end of the evaluation effort remains to be seen (Rosenbaum & Stoddart, 1985).

Although the functionalized ESL program curriculum was in use at all the sites we visited, its presentation varied as a function of supplementary materials added by teachers (Training Extension Course tapes, SMART books, etc.)

and fluctuating enrollment patterns. At a few posts, program directors decided to adhere strictly to curriculum materials and made no attempt to introduce ancillary materials.

The distribution of ECLT entry scores for soldiers participating in the job-related program has shifted markedly from a majority with low- and mid-level scores to a majority with mid- and high-level scores. Nonetheless, more than 50% of the entry scores are still below 50, and this means that these soldiers are not part of the target population for whom the curriculum was developed. Participants with lower entry scores spend the first 2 weeks of instruction on basic English grammar and vocabulary before advancing to the functionalized curriculum. Scores on the end-of-course test developed to accompany the curriculum reflect the need for extra instructional attention on the part of lower scoring soldiers. Participants in the target population are more likely to pass this test than are those who enter the program with ECLT scores below 50 (2/3 vs. 1/3). Overall ECLT gains, however, averaged just about two points per week just as they did in other programs. This similarity must be viewed in the context of a military-based curriculum. The ECLT includes no military content, so that comparable achievements on the part of functionalized program graduates represent a somewhat higher level of accomplishment.

In terms of magnitude of ECLT gains, the data are a bit different from those gathered on other ESL programs. The nontarget population (ECLT scores below 50) showed substantially greater gains than did participants whose entry scores were 50 or higher. This may be because these soldiers spend the initial period of instruction studying fundamental language skills.

It is important to note that the change introduced in the ESL programs consisted only of a new curriculum. All the other features of the standard ESL programs that may have limited their effectiveness--the low-bid system, the teachers without prior ESL experience, the classes incorporating wide-ranging skill levels, the soldiers assigned to ESL companies, and the lack of emphasis on English conversation--must be assumed to have the same impact on the job-related program. However, participating soldiers expressed very positive opinions about the program and the teachers and reported that the program provided them with enough English-language skills to succeed in training (Rosenbaum & Stoddart, 1985).

SUMMARY

A general overview of BSEP reveals that it improves soldiers' basic skills and that the improvement is greater for soldiers whose entry scores are very low. Those who benefit most directly from BSEP, participating soldiers and their supervisors, acknowledge that the program is worthwhile and point to enhanced motivation and self-esteem. However, it is important to note that a substantial number of soldiers leave the program without meeting criterion standards. These soldiers enter basic training or return to their unit assignments regardless of performance in BSEP, and this circumstance can lead to adverse criticism of program achievements as well as to dissatisfaction on the part of Commanders.

An equally important point is that the Army is continually trying to update and improve BSEP to ensure that it more closely meets program goals. The variety of pilot and revised programs discussed in this report--e.g., Instrumental Enrichment, Job Skills Education, extended-duration ESL and functionalized ESL programs--are just a few examples of this ongoing concern. In line with this interest, the final task of our evaluation will be to develop and test a Quality Control System that will provide continuous information about the status and effectiveness of all basic skills programs throughout the Army.

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